



**TETRA TECH, INC.**

1073923 - R8 SDMS

July 19, 2007

Mr. Stan Sternberg  
Montana Department of Transportation  
Environmental Services Bureau  
2701 Prospect Avenue  
P.O. Box 201001  
Helena, Montana 59620-1001

**RECEIVED**

**JUL 23 2007**

**ENVIRONMENTAL**

**RE: Report of Findings  
Sampled Worker Air Space During Routine Maintenance Activities  
Libby, Montana  
MDT Task Order No. 605; Tetra Tech No. 1156561296**

Dear Mr. Sternberg:

The Montana Department of Transportation (MDT) requested in their letter (MDT, 2006a) to Tetra Tech, Inc. (Tetra Tech, formerly Maxim Technologies) dated April 8, 2006, that Tetra Tech assist them with asbestos sampling, analysis and related industrial hygiene services in the Libby area. In response, Tetra Tech developed the work plan and cost estimate subsequently submitted to MDT on May 22, 2006 (Maxim, 2006). MDT approved the work plan and cost estimate in their letter to Tetra Tech dated May 26, 2006 (MDT, 2006b). In accordance with the work plan, Tetra Tech developed a sampling and analysis plan (SAP) that outlined the methods for sampling aerosol dust emissions resulting from road sweeping operations and from other select MDT maintenance personnel activities (Maxim, 2006b). Protocol identified in the SAP was followed for all subsequent sample collection. This report presents results of the most recent sampling conducted during June 2007. Attachments to this report include A which contains a tabulated summary of sample results, B the laboratory analytical report, and C references.

## **PROJECT BACKGROUND**

Tetra Tech previously collected 284 soil samples from MDT Rights of Way (ROWs), surface soil at the MDT Libby Maintenance Section Facility, and road sweepings piles from two road sweepers from July 11, 2006 through July 28, 2006. Soil samples were collected within 10-feet of the pavement boundary at approximately 0.25 mile intervals along both sides of selected ROWs within an approximate 5-mile radius of the Town of Libby. Asbestos was detected in seven of the 284 soil samples collected. All seven soil samples where asbestos was detected were collected from the gravel pit located along the gravel road to the former W.R. Grace Vermiculite Mine. All other soil analytical data indicated that asbestos was not detected in soil samples collected from the MDT Libby Maintenance Facility or along the MDT ROWs of Highways 2, 37, 260, 482, and 567 (Tetra Tech, 2007).

Tetra Tech also previously collected negative exposure assessment air samples during routine maintenance activities. Previously conducted air sampling results indicated that the front of the mower during mowing showed 0.075 fibers per cubic centimeter (f/cc) of Tremolite and Actinolite asbestos

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fibers. Additionally, the highest result for a sample collected on MDT maintenance personnel during completion of the maintenance tasks was 0.045 f/cc collected on the loader operator during ditching. Although this result indicates personal exposure to airborne asbestos fibers, the value is less than half the current OSHA PEL for asbestos of 0.1 f/cc.

The previously conducted soil and air sampling showed that asbestos fibers were detected and concentrations of airborne asbestos fibers found during the NEAs were below the OSHA PEL of 0.1 f/cc. However, Tetra Tech recommended that MDT maintenance personnel conducting these tasks don personal protective equipment (PPE) including disposable Tyvek-type coveralls and 1/2-face negative-pressure air purifying respirators equipped with P100 filters. This PPE was recommended to reduce the potential for asbestos fibers to be carried home with the worker and reduce the inhalation exposure to asbestos fibers. Additionally, Tetra Tech recommended the MDT personnel who wear this PPE be trained in the proper maintenance, use, and limitations of such PPE (Tetra Tech, 2007).

On April 20, 2007, MDT requested Tetra Tech conduct additional NEA sampling of routine maintenance activities along MT 37.

### **SAMPLE COLLECTION SUMMARY**

From June 6 through 8, 2007, 30 air samples were collected as part of negative exposure assessments (NEAs) conducted during several routine MDT maintenance activities performed along MT 37. Activities included ditch cleaning, brush cutting, and mowing. Four air sampling pumps and cassettes were placed on each piece of equipment. One air sampling pump was placed on each side, including left, right, front, and rear. Additional pumps were placed, one on the operator, and one on each laborer (if present) to sample the fugitive dust emitted during the routine maintenance activities. Air sampling was conducted on each piece of equipment during operation and sampling cassettes were checked for possible overloading at regular intervals during each daily maintenance work shift in an attempt to prevent overloading of the internal filter.

During the air sampling on June 6, 2007 weather conditions ranged from dry to raining. The soils were moist and little to no visible dust was being emitted while moving rock and soil of ditch cleaning operations. During the air sampling on June 7, 2007 the weather conditions were approximately 50 degrees Fahrenheit, humid, with intermittent rain sprinkles. Precipitation ceased at approximately 1045 AM during the June 7 sampling event. During the two weeks prior to Tetra Tech's air sampling, weather in the Libby area included above average levels of precipitation and below average temperatures.

All collected air samples were submitted to EMSL, Inc. in Westmont, New Jersey for transmission electron microscopy (TEM) analysis for asbestos, including Libby Amphibole (LA) Asbestos, in accordance with SOP SRC-LIBBY-03 (Revision 1) and the National Institute of Occupational Safety and Health (NIOSH) Method 7402.

## **SAMPLE RESULTS SUMMARY**

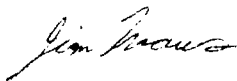
### **Air Sampling**

Negative exposure assessment air sample results are shown in Table I (Attachment A). Because we desired to know the asbestos fiber concentrations and type of Libby Amphibole asbestos present in each sample, if any, TEM analysis was completed. With the exception of one sample, no asbestos fibers were detected on the samples collected. The only TEM result showing an asbestos fiber was a sample collected on the back of the brush cutter during brush cutting and had an asbestos concentration of  $<0.004$  f/cc of Tremolite asbestos classified as Libby Amphibole. Due to the relatively low air sample volumes resulting from the short duration of the activities sampled, the limit of laboratory detection for TEM analyses ranged from as low as  $0.004$  f/cc to  $0.018$  f/cc. The highest detection limit of  $0.018$  f/cc is one order of magnitude below the PEL of  $0.1$  f/cc. No additional asbestos fibers were detected during our June 2007 air sampling event. Based on the 30 samples collected, airborne asbestos concentrations during the routine maintenance activities sampled ranged from  $<0.004$  to  $<0.018$  f/cc.

## **SUMMARY AND CONCLUSIONS**

Air sample results indicate that the asbestos fiber concentrations found on all 30 samples collected and analyzed during the June 2007 NEAs were well below the OSHA PEL of  $0.1$  f/cc. However, due to the known presence of asbestos fibers, Tetra Tech continues to recommend MDT maintenance personnel conducting tasks where asbestos fibers could be disturbed or encountered don personal protective equipment (PPE) including disposable Tyvek-type coveralls and  $\frac{1}{2}$ -face negative-pressure air purifying respirators equipped with P100 filters. This PPE will reduce the potential for asbestos fibers to be carried home with the worker and reduce the inhalation exposure to asbestos fibers. Additionally, we recommend the MDT personnel who will be wearing this PPE be trained in the proper maintenance, use, and limitations of the PPE.

Respectfully Submitted,



James Maus  
Project Coordinator



Ryan C. Behrends  
Environmental Scientist

Attachments: A      Tables  
                  B      Laboratory Analytical Report  
                  C      References

**ATTACHMENT A  
TABLES**

**TABLE 1**  
**NEGATIVE EXPOSURE ASSESSMENT AIR SAMPLE RESULTS SUMMARY**  
**SELECT MDT MAINTENANCE ACTIVITIES ALONG MT 37 RIGHT-OF-WAY**  
**LIBBY, MONTANA**

Maintenance Activity Description	Sample	Milepost	Sample Date	Volume Liters	METHOD OF ANALYSIS					
					PCM		TEM			
					Limit of Detection	Fibers/cc	NonAsbestos Fibers	Asbestos Fibers	Asbestos Types	Adjusted Fibers/CC
PERSONAL - KIP NIXON	060607-ME4-41	4.0/9.3	6/6/2007	569.3	0.005	n/a	0	0		< 0.005
LOADER - RIGHT SIDE	060607-ME4-42	4.0/9.3	6/6/2007	371.3	0.007	n/a	0	0		< 0.007
LOADER - LEFT SIDE	060607-ME4-43	4.0/9.3	6/6/2007	377	0.007	n/a	0	0		< 0.007
LOADER - FRONT SIDE	060607-ME4-44	4.0/9.3	6/6/2007	380.3	0.007	n/a	0	0		< 0.007
LOADER - BACK SIDE	060607-ME4-45	4.0/9.3	6/6/2007	378.8	0.007	n/a	0	0		< 0.007
BLANK	060607-ME4-46	4.0/9.3	6/6/2007	0		n/a	0	0		n/a
PERSONAL - KIP NIXON	060607-ME4-47	2.5/6.2	6/7/2007	652.4	0.004	n/a	0	0		< 0.004
BRUSH CUTTER - RIGHT SIDE	060607-ME4-48	2.5/6.2	6/7/2007	487.1	0.006	n/a	0	0		< 0.006
BRUSH CUTTER - LEFT SIDE	060607-ME4-49	2.5/6.2	6/7/2007	366.2	0.007	n/a	0	0		< 0.007
BRUSH CUTTER - FRONT SIDE	060607-ME4-50	2.5/6.2	6/7/2007	478.5	0.006	n/a	0	0		< 0.006

- 1) Tremolite/Actinolite is representative of Libby Amphibole
- 2) Reported using only TEM because PCM was overloaded
- 3) Field Blank
- 4) PCM and TEM Overloaded so not analyzed

**TABLE 1**  
**NEGATIVE EXPOSURE ASSESSMENT AIR SAMPLE RESULTS SUMMARY**  
**SELECT MDT MAINTENANCE ACTIVITIES ALONG MT 37 RIGHT-OF-WAY**  
**LIBBY, MONTANA**

Maintenance Activity Description	Sample	Milepost	Sample Date	Volume Liters	METHOD OF ANALYSIS					
					PCM		TEM			
					Limit of Detection	Fibers/cc	NonAsbestos Fibers	Asbestos Fibers	Asbestos Types	Adjusted Fibers/CC
BRUSH CUTTER - BACK SIDE	060607-ME4-51	2.5/6.2	6/7/2007		n/a				VOID SAMPLE	VOID
PERSONAL - DAVE NOBLE	060607-ME4-52	0.8/9.5	6/7/2007	502.6	0.005	n/a	0	0		< 0.005
MOWER - RIGHT SIDE	060607-ME4-53	0.8/9.5	6/7/2007	304.5	0.009	n/a	0	0		< 0.009
MOWER - LEFT SIDE	060607-ME4-54	0.8/9.5	6/7/2007	342.1	0.008	n/a	0	0		< 0.008
MOWER - FRONT SIDE	060607-ME4-55	0.8/9.5	6/7/2007	331.4	0.008	n/a	0	0		< 0.008
MOWER - BACK SIDE	060607-ME4-56	0.8/9.5	6/7/2007	307.1	0.009	n/a	0	0		< 0.009
BLANK	060607-ME4-57	0.8/9.5	6/7/2007	0		n/a	0	0		n/a
MOWER - RIGHT SIDE	060607-ME4-58	6.2/9.5	6/7/2007	165	0.016	n/a	0	0		< 0.016
MOWER - LEFT SIDE	060607-ME4-59	6.2/9.5	6/7/2007	186.1	0.014	n/a	0	0		< 0.014
MOWER - FRONT SIDE	060607-ME4-60	6.2/9.5	6/7/2007	146.5	0.018	n/a	0	0		< 0.018

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**TABLE 1**  
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**LIBBY, MONTANA**

Maintenance Activity Description	Sample	Milepost	Sample Date	Volume Liters	METHOD OF ANALYSIS					
					PCM		TEM			
					Limit of Detection	Fibers/cc	NonAsbestos Fibers	Asbestos Fibers	Asbestos Types	Adjusted Fibers/CC
MOWER - BACK SIDE	060607-ME4-61	6.2/9.5	6/7/2007	177.3	0.015	n/a	0	0		< 0.015
BRUSH CUTTER - RIGHT SIDE	060607-ME4-62	5.2/6.2	6/7/2007	190.2	0.014	n/a	0	0		< 0.014
BRUSH CUTTER - LEFT SIDE	060607-ME4-63	5.2/6.2	6/7/2007	177.1	0.015	n/a	0	0		< 0.015
BRUSH CUTTER - FRONT SIDE	060607-ME4-64	5.2/6.2	6/7/2007	201.6	0.013	n/a	0	0		< 0.013
BRUSH CUTTER - BACK SIDE	060607-ME4-65	5.2/6.2	6/7/2007	163.1	0.017	n/a	0	0		< 0.017
PERSONAL - KIP NIXON	060607-ME4-66	6.2/8.0	6/8/2007	696	0.004	n/a	0	0		< 0.004
BRUSH CUTTER - RIGHT SIDE	060607-ME4-67	6.2/8.0	6/8/2007	667.4	0.004	n/a	0	0		< 0.004
BRUSH CUTTER - LEFT SIDE	060607-ME4-68	6.2/8.0	6/8/2007	719.6	0.004	n/a	0	0		< 0.004
BRUSH CUTTER - FRONT SIDE	060607-ME4-69	6.2/8.0	6/8/2007	687.2	0.004	n/a	0	0		< 0.004
BRUSH CUTTER - BACK SIDE	060607-ME4-70	6.2/8.0	6/8/2007	676.8	0.004	n/a	0	1	Tremolite/Actinolite (1)	< 0.004

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**LIBBY, MONTANA**

Maintenance Activity Description	Sample	Milepost	Sample Date	Volume Liters	METHOD OF ANALYSIS					
					PCM		TEM			
					Limit of Detection	Fibers/cc	NonAsbesto s Fibers	Asbestos Fibers	Asbestos Types	Adjusted Fibers/CC
BLANK	060607-ME4-71	6.2/8.0	6/8/2007	0		n/a	0	0		n/a

- 1) Tremolite/Actinolite is representative of Libby Amphibole
- 2) Reported using only TEM because PCM was overloaded
- 3) Field Blank
- 4) PCM and TEM Overloaded so not analyzed



**ATTACHMENT B**  
**LABORATORY ANALYTICAL REPORT**

**EMSL Analytical, Inc.**

107 Haddon Ave., Westmont, NJ 08108

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**Tetra Tech/Maxim Technologies Inc.**  
**618 South 25th Street**  
**Billings, MT 59101**

Fax: (406) 248-9282 Phone: (406) 248-9161  
Project: **MDT LIBBY 6561296.100**

Customer ID: MAXI52  
Customer PO:  
Received: 06/13/07 9:50 AM  
EMSL Order: 040712503  
EMSL Proj:  
Analysis Date: 6/16/2007  
Report Date: 7/11/2007

**Asbestos Analysis of Air Samples by Transmission Electron Microscopy via NIOSH Method 7402**

Sample	Volume (Liters)	Non Asbestos Fibers	PCM F/cc	Asbestos Type(s)	Asbestos Fibers	Asbestos % of total	7402 Adjusted (TEM) F/cc	Notes
060607-ME4-41 040712503-0001	569.3	0	n/a			0	<0.005	Reported using TEM data only
060607-ME4-42 040712503-0002	371.3	0	n/a			0	<0.007	Reported using TEM data only
060607-ME4-43 040712503-0003	377	0	n/a			0	<0.007	Reported using TEM data only
060607-ME4-44 040712503-0004	380.3	0	n/a			0	<0.007	Reported using TEM data only
060607-ME4-45 040712503-0005	378.8	0	n/a			0	<0.007	Reported using TEM data only
060607-ME4-46 040712503-0006	0	0	n/a			0	n/a	Field Blank
060707-ME4-47 040712503-0007	652.4	0	n/a			0	<0.004	Reported using TEM data only
060707-ME4-48 040712503-0008	487.1	0	n/a			0	<0.006	Reported using TEM data only
060707-ME4-49 040712503-0009	366.2	0	n/a			0	<0.007	Reported using TEM data only

Analyst(s)

Frank Craig (30)

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

EMSL is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. The test results contained within this report meet the requirements of NELAC unless otherwise noted. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted. Analysis performed by EMSL Westmont (NY ELAP #10872, AIHA #100194)

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Sample	Volume (Liters)	Non Asbestos Fibers	PCM F/cc	Asbestos Type(s)	Asbestos Fibers	Asbestos % of total	7402 Adjusted (TEM) F/cc	Notes
060707-ME4-50 040712503-0010	478.5	0	n/a			0	<0.006	Reported using TEM data only
060707-ME4-52 040712503-0011	502.6	0	n/a			0	<0.005	Reported using TEM data only
060707-ME4-53 040712503-0012	304.5	0	n/a			0	<0.009	Reported using TEM data only
060707-ME4-54 040712503-0013	342.1	0	n/a			0	<0.008	Reported using TEM data only
060707-ME4-55 040712503-0014	331.4	0	n/a			0	<0.008	Reported using TEM data only
060707-ME4-56 040712503-0015	307.1	0	n/a			0	<0.009	Reported using TEM data only
060707-ME4-57 040712503-0016	0	0	n/a			0	n/a	Field Blank
060707-ME4-58 040712503-0017	165	0	n/a			0	<0.016	Reported using TEM data only
060707-ME4-59 040712503-0018	186.1	0	n/a			0	<0.014	Reported using TEM data only

Analyst(s)

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**Asbestos Analysis of Air Samples by Transmission Electron Microscopy via NIOSH Method 7402**

Sample	Volume (Liters)	Non Asbestos Fibers	PCM F/cc	Asbestos Type(s)	Asbestos Fibers	Asbestos % of total	7402 Adjusted (TEM) F/cc	Notes
060707-ME4-60 040712503-0019	146.5	0	n/a			0	<0.018	Reported using TEM data only
060707-ME4-61 040712503-0020	177.3	0	n/a			0	<0.015	Reported using TEM data only
060707-ME4-62 040712503-0021	190.2	0	n/a			0	<0.014	Reported using TEM data only
060707-ME4-63 040712503-0022	177.1	0	n/a			0	<0.015	Reported using TEM data only
060707-ME4-64 040712503-0023	201.6	0	n/a			0	<0.013	Reported using TEM data only
060707-ME4-65 040712503-0024	163.1	0	n/a			0	<0.017	Reported using TEM data only
060807-ME4-66 040712503-0025	696	0	n/a			0	<0.004	Reported using TEM data only
060807-ME4-67 040712503-0026	667.4	0	n/a			0	<0.004	Reported using TEM data only
060807-ME4-68 040712503-0027	719.6	0	n/a			0	<0.004	Reported using TEM data only

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### Asbestos Analysis of Air Samples by Transmission Electron Microscopy via NIOSH Method 7402

Sample	Volume (Liters)	Non Asbestos Fibers	PCM F/cc	Asbestos Type(s)	Asbestos Fibers	Asbestos % of total	7402 Adjusted (TEM) F/cc	Notes
060807-ME4-69 040712503-0028	687.2	0	n/a			0	<0.004	Reported using TEM data only
060807-ME4-70 040712503-0029	676.8	0	n/a	Tremolite	1	100	<0.004	Reported using TEM data only Tremolite to be classified as Libby Amphibole
060807-ME4-71 040712503-0030	0	0	n/a			0	n/a	Field Blank

NIOSH 7402 method only reports fibers  $\geq 5\mu\text{m}$  in length and  $\geq 0.25\mu\text{m}$  in width.

Average number of asbestos fibers on field blanks: 0

Average number of non-asbestos fibers on field blanks: 0

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Frank Craig (30)

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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TEM7402-1

THIS IS THE LAST PAGE OF THE REPORT.



046712503

**EMSL Westmont, NJ ♦ 107 Haddon Ave, Westmont NJ 08108****EMSL ANALYTICAL, Inc.****CHAIN OF CUSTODY****WWW.EMSL.COM**

**EMSL Rep:** Nicole Gillar  
**Company:** Maxim Technologies  
**Contact:** Ryan C. Behrends  
**Address:** 618 S. 25<sup>th</sup> Street  
**City & State:** Billings, Montana **Zip** 59101  
**Phone:** 406-248-9161  
☒ **Email Results** rbehrend@maximusa.com  
**Project Name or** MDT Libby  
**Number:** 6561296.100

**Third Party Billing** *\*requires written authorization from third party*  
**EMSL-Bill to:** \_\_\_\_\_  
**Contact:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**City & State:** \_\_\_\_\_ **Zip** \_\_\_\_\_  
**Fax:** 406-248-9282  
☐ **Fax results** \_\_\_\_\_  
**Purchase Order** \_\_\_\_\_  
**Number:** \_\_\_\_\_

**TURNAROUND TIME**

☐ 3 Hours ☐ 6 Hours ☐ 12 Hours ☐ 24 Hours ☐ 48 Hours ☐ 72 Hours ☐ 4 Days ☒ 5 Days ☐ 6-10 Days

**SAMPLE MATRIX**

☒ Air ☐ Bulk ☐ Soil ☐ Wipe ☐ Micro-Vac ☐ Drinking Water ☐ Wastewater ☐ Chips ☐ Other

**ASBESTOS ANALYSIS****PCM - Air**☐ NIOSH 7400 (A) Issue 2: August 1994☐ OSHA w/TWA**TEM AIR**☐ AHERA 40 CFR, Part 763 Subpart E☐ NIOSH 7402 Issue 2☐ ASTM D 6281☒ EPA Level II**PLM - Bulk**☐ EPA 600/R-93/116☐ NY Stratified Point Count☐ CARB 435 Level: ☐ A ☐ B ☐ C ☐ D ☐ E☐ NIOSH 9002☐ PLM NOB (Gravimetric) NYS 198.1☐ EPA Point Count (400 Points)☐ EPA Point Count (1,000 Points)☐ Standard Addition Point Count**SOILS**☐ EPA Protocol ☐ Qualitative ☐ Quantitative☐ CARB 435 Level: ☐ A ☐ B ☐ C ☐ D ☐ E☐ EMSL MSD 9000 Method fibers gram☐ Superfund EPA 540-R097-028 (dust generation)**TEM BULK**☐ Drop Mount (Qualitative)☐ Chatfield SOP-1988-02☐ TEM NOB (Gravimetric) NY 198.4**TEM MICROVAC**☐ ASTM D 5755-95 (Quantitative)**TEM WIPE**☐ ASTM D-6480-99☐ Qualitative**TEM WATER**☐ EPA 100.1☐ EPA 100.2☐ NYS 198.2☒ **OTHER:** TEM for Libby Amphibole Asbestos by NIOSH 7402, as discussed with Mr. Steve Siegel of EMSL**LEAD ANALYSIS****Flame Atomic Absorption**☐ Wipe, SW846-7420 ☐ ASTM ☐ non ASTM☐ Soil, SW846-7420☐ Air, NIOSH 7082☐ Chips, SW846-7420 or AOAC 5.009 (974.02)☐ Wastewater, SW 846-7420☐ TCLP LEAD SW846-1311/7420**Graphite Furnace Atomic Absorption**☐ Air, NIOSH 7105☐ Wastewater, SW846-7421☐ Soil, SW846-7421☐ Drinking Water, EPA 239.2**ICP - Inductively Coupled Plasma**☐ Wipe, SW846-6010 ☐ ASTM ☐ non ASTM☐ Soil, SW846-6010☐ Air, NIOSH 7300**MATERIALS ANALYSIS**☐ Full Particle Identification☐ Optical Particle Identification☐ Dust Mites and Insect Fragments☐ Particle Size & Distribution☐ Product Comparison☐ Paint Characterization☐ Failure Analysis☐ Corrosion Analysis☐ Glove Box Containment Study☐ Petrographic Examination of Concrete☐ Portland Cement in Workplace Atmospheres (OSHA ID-143)☐ Man Made Vitreous Fibers - MMVF's☐ Synthetic Fiber Identification☐ Other: \_\_\_\_\_**MICROBIAL ANALYSIS****Air Samples**☐ Mold & Fungi by Air O Cell☐ Mold & Fungi by Slides☐ Mold & Fungi with Agar Plate by**Speciation**☐ Mold & Fungi with Agar Plate by Genus☐ Bacterial Count and Gram Stain☐ Bacterial Count and Identification☐ Bacteria Sewage Contamination**Water Samples**☐ Total Coliforms, Fecal Coliforms☐ Escherichia Coli, Fecal Streptococcus☐ Legionella☐ Salmonella☐ Giardia and Cryptosporidium**Wipe and Bulk Samples**☐ Mold & Fungi - Direct Examination☐ Mold & Fungi - (Culture follow up to direct examination if necessary)☐ Mold & Fungi - Culture (Count & ID)☐ Mold & Fungi - Culture (Count only)☐ Bacterial Count & Gram Stain☐ Bacterial Count & Identification☐ (3 most prominent types)☐ Other: \_\_\_\_\_**IAQ ANALYSIS**☐ Nuisance Dust (NIOSH 0500 & 0600)☐ Airborne Dust (PM10, TSP)☐ Silica Analysis by XRD (Group)☐ NIOSH 7500☐ Alpha Quartz☐ Cristobalite☐ Tridymite☐ HVAC Efficiency☐ Carbon Black

nt Sample # (S)

Relinquished:

Received:

Relinquished:

Received:

Date:

Date:

Date:

Date:

TOTAL SAMPLE #

Time:

Time:

Time:

Time:

04071250<sup>±</sup>

EMSL Westmont, NJ ♦ 107 Haddon Ave, Westmont NJ 08108

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME Air (L) Area (Inches sq.)
060607-MEU - 41	PERSONAL - Vix Nixon - Hwy 37 mi 4.0 to 9.3	569.3
- 42	LOADER - RIGHT SIDE -	3711.3
- 43	- LEFT SIDE -	377.0
- 44	- FRONT -	380.3
- 45	↓ - BACK - ↓	378.8
✓ - 46	BLANK	NA
060707-MEU - 47	PERSONAL - KIP Nixon - Hwy 37 mi 2.5 to 6.2	652.4
- 48	BRUSH CUTTER - RIGHT mi 2.5 to 5.2	487.1
- 49	- LEFT	566.2
- 50	- FRONT	478.5
VOID - 51	BACK	VOID
- 52	PERSONAL - DAVE NOBLE - Hwy 37 mi 0.8 to 9.5	502.6
- 53	MOWER - RIGHT - mi 0.8 to 6.2	304.5
- 54	LEFT -	342.1
- 55	FRONT -	331.4
- 56	BACK -	307.1
- 57	BLANK	NA
- 58	MOWER - RIGHT - Hwy 37 mi 6.2 to 9.5	165.0
- 59	LEFT	186.1
- 60	FRONT	146.5
- 61	BACK	177.2
- 62	BRUSH CUTTER - RIGHT Hwy 37 mi 5.2 to 6.2	190.0
- 63	LEFT	177.0
- 64	FRONT	201.0
✓ - 65	BACK	163.0

Relinquished:  
- signed:Max Henderson

Date:

6-11-07

Time:

0800

SAMPLES ACCEPTED  
FOR ANALYSIS BY  
EMSL ANALYST  
WESTMONT, NJ  
07 JUL 18 AM 10:50  
1101



04071250

EMSL Westmont, NJ ♦ 107 Haddon Ave, Westmont NJ 08108

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME Air (L) Area (Inches sq.)
060807 ME11-66	KIP HIWAY 37 PERSONAL NIXON MI 6.2 to 8.0	616.0
-67	BRUSH CUTTER - RIGHT -	667.4
-68	- LEFT -	719.6
-69	- FRONT -	687.2
-70	↓ - BACK - ↓	676.8
✓ -71	BLANK	NA

Relinquished:

Max Lendrum

Date:

6-11-07

Time:

080007 JUN 12 11:10:57  
RECEIVED  
WESTMONT, NJ



**ATTACHMENT C**  
**REFERENCES**

## **References**

- Camp, Dresser, McKee, 2005. Contaminant Screening Study, Libby Asbestos Site, Operable Unit 4, Libby, Montana. Final Summary Report for the J. Neils Park and Montana State Highway 37 Investigations, Revision 1. December 15.
- Maxim, 2006. Work Plan and Cost Estimate for Asbestos Consulting and Industrial Hygiene Services in the Libby Area, Lincoln County, Montana. Task Order No. 605. May 22.
- Maxim, 2006b. Sampling and Analysis Plan for Potentially Asbestos-Containing Soil in MDT Rights of Way, Traction Sand and Road Aggregate Sources, Collected Road Sweepings, and Sweeper Emissions, Libby, Montana. Task Order No. 605. June 30.
- MDT, 2006a. Task Order No. 605, Request for Asbestos Sampling, Analysis, and Related Industrial Hygiene Services in the Libby Area, Lincoln County, Montana. April 8.
- MDT, 2006b. Task Order No. 605, Request for Asbestos Sampling, Analysis, and Related Industrial Hygiene Services in the Libby Area, Lincoln County, Montana. May 26.
- Tetra Tech, 2007. Report of Findings, Potentially Asbestos-Containing Soil in MDT Rights of Way, Traction Sand and Road Aggregate Sources, Collected Road Sweepings, and Sampled Worker Air Space During Routine Maintenance Activities, Libby, Montana. Task Order No. 605. February 21.